

Project Design Phase-II Technology Stack (Architecture & Stack)

Date	30 June 2025
Team ID	LTVIP2025TMID49941
Project Name	Toycraft tales: tableau's vision into toy manufacturer data
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Order processing during pandemics for offline mode

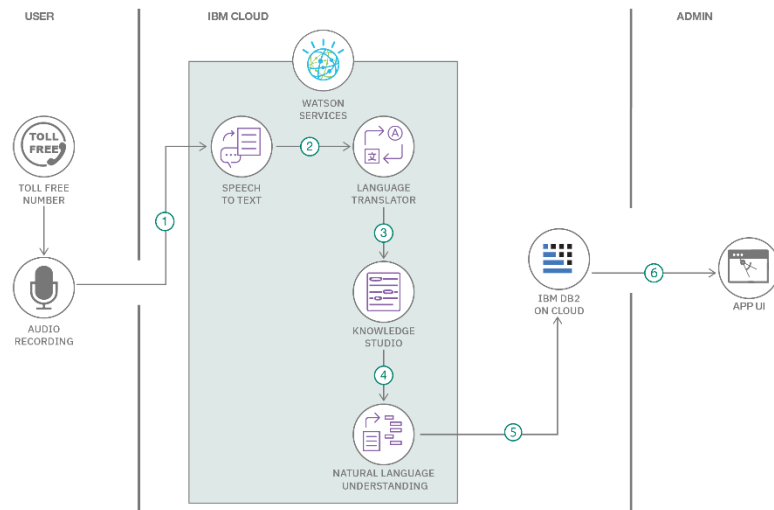


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web-based dashboard to view toy analytics	HTML, CSS, JavaScript / React Js .
2.	Application Logic-1	Business logic for user interaction and filtering	Python
3.	Application Logic-2	Visualization engine	Tableau Public, Plotly.js
4.	Application Logic-3	Data processing logic	Pandas, NumPy
5.	Database	Storage of user data and toy manufacturing stats	MySQL
6.	Cloud Database	Cloud-hosted database for scalability	Firebase Realtime DB / Google Cloud SQL
7.	File Storage	Uploading production reports or analytics files	Firebase Storage / AWS S3
8.	External API-1	User authentication	Google OAuth API
9.	External API-2	analytics or demographic enrichment	Open APIs (e.g., World Population API)
10.	Machine Learning Model	For predicting toy demand or trends	Sklearn, TensorFlow (if ML is used)
11.	Infrastructure (Server / Cloud)	Deployment on cloud/local system	Heroku / Vercel / Google Cloud Platform

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Used frameworks and libraries	Technology of Opensource framework
2.	Security Implementations	Authentication, data protection, secure storage	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Designed to handle more users/data over time	Technology used
4.	Availability	Uptime and failover support	Technology used
5.	Performance	Optimized loading, API limits, caching	Technology used